

ABSTRACT

Disclosed herein is a rotational phase  
difference detecting system and method that is capable  
5 of very accurately detecting a rotational phase difference  
between a plurality of rotating bodies. There is also  
disclosed a machine operating-state monitoring system and  
method employing the rotational phase difference detecting  
system. The detecting system has a first rotating body  
10 (13) with a first mark (12), a second rotating body (11)  
with a second mark (10), a mark sensor (4) for detecting  
the first mark, a first camera (2) for imaging the second  
mark when the mark sensor detects the first mark, and a  
display section (7) for displaying the second mark imaged  
15 by the first camera. The rotational phase difference is  
detected from a position of an image of the second mark  
displayed on the display section and is thus detected very  
accurately with a simple construction comprising the mark  
sensor, the first camera, and the display section.

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